567—65.100(455B,459,459A) Definitions. In addition to the definitions in Iowa Code sections 455B.101 and 455B.171 and 2005 Iowa Code Supplement section 459A.102, the following definitions shall apply to Division II of this chapter:

"Abandoned" means an open feedlot operation structure that has been razed, removed from the site of an open feedlot operation, filled in with earth, or converted to uses other than an open feedlot operation structure so that it cannot be used as an open feedlot operation structure without significant reconstruction.

"Adjacent." Two or more open feedlot operations are defined as adjacent if both of the following occur:

1. At least one open feedlot operation structure is constructed on or after July 17, 2002.
2. An open feedlot operation structure which is part of one open feedlot operation is separated by less than 1250 feet from an open feedlot operation structure which is part of the other open feedlot operation.

"Alternative technology settled open feedlot effluent control system" or *"AT system"* means use of an open feedlot effluent control technology other than a conventional runoff containment system to control and dispose of settled open feedlot effluent. The department may allow an open feedlot operation covered by the NPDES permit application requirements of 65.102(455B,459A) or 65.103(455B,459A) to use an AT system, provided the open feedlot operation satisfactorily demonstrates the AT system will provide an equivalent level of performance to that achieved by a runoff containment system that is designed and operated as required by statute, 567—subrule 62.4(12) and Division II of this chapter. Demonstration of equivalent performance must include submitting results of computer modeling which compares the predicted performance of the proposed system with that of a conventional runoff containment system over the same period. The specific requirements which must be met for an open feedlot operation to qualify for use of an AT system and the information which must be submitted to the department are outlined in rule 65.110(459A).

Design requirements have been established for two types of AT systems. These are a vegetative infiltration basin (VIB) followed by a vegetative treatment area (VTA) and a stand–alone vegetative treatment area (VTA). If other AT systems are developed that meet the equivalent performance standard established under EPA's CAFO rules, the department will consider their acceptance on a case–by–case basis.

"Animal" means a species classified as cattle, swine, horses, sheep, chickens or turkeys.

"Animal capacity" means the maximum number of animals which the owner or operator will confine in an open feedlot operation at any one time.

"Animal feeding operation" or *"AFO"* means a lot, yard, corral, building, or other area in which animals are confined and fed and maintained for 45 days or more in any 12–month period, and all structures used for the storage of manure from animals in the operation. An animal feeding operation does not include a livestock market.

Pursuant to federal regulations, a livestock market could satisfy the definitions of an AFO and a CAFO and thus be subject to NPDES permit requirements. In order to implement the federal NPDES permit program, the commission must adopt rules which are no less stringent than federal regulations. Therefore, for the purposes of the NPDES permit program, an AFO can include a livestock market.

"Animal unit" means a unit of measurement based upon the product of multiplying the number of animals of each category by a special equivalency factor, as follows:

1. Slaughter and feeder cattle		1.000
2. Immature dairy cattle	1.000	
3. Mature dairy cattle	1.400	

4. Butcher or breeding swine weighing more than 55 pounds 0.400
5. Swine weighing 15 pounds or more but not more than 55 pounds 0.100
6. Sheep or lambs 0.100
7. Horses 2.000
8. Turkeys weighing 112 ounces or more 0.018
9. Turkeys weighing less than 112 ounces 0.0085
10. Chickens weighing 48 ounces or more 0.010
11. Chickens weighing less than 48 ounces 0.0025

"Animal unit capacity" means a measurement used to determine the maximum number of animal units that may be maintained as part of an open feedlot operation.

"Common management" means significant control by a person of the management of the day–to–day operations of each of two or more open feedlot operations. "Common management" does not include control over a contract livestock facility by a contractor, as defined in Iowa Code section 202.1.

"Common ownership" means to hold an interest in each of two or more open feedlot operations as any of the following:

1. A sole proprietor.
2. A joint tenant or tenant in common.
3. A holder of a majority equity interest in a business association as defined in Iowa Code section 202B.102, including as a shareholder, partner, member, beneficiary, or other equity interest holder.

An interest in an open feedlot operation under "2" or "3" above is a common ownership interest when it is held directly or indirectly through a spouse or dependent child, or both.

"Concentrated animal feeding operation" or *"CAFO"* means an AFO that is defined as a large CAFO, a medium CAFO, or a designated CAFO.

"Deep well" means a well located and constructed in such a manner that there is a continuous layer of low permeability soil or rock at least 5 feet thick located at least 25 feet below the normal ground surface and above the aquifer from which water is to be drawn.

"Designated area" means a known sinkhole, or a cistern, abandoned well, unplugged agricultural drainage well, agricultural drainage well surface tile inlet, drinking water well, designated wetland, lake, or water source. A designated area does not include a terrace tile inlet or surface tile inlet other than an agricultural drainage well surface tile inlet.

"Designated CAFO" means an AFO that has been designated as a CAFO pursuant to rule 65.103(455B,459A).

"Discontinued open feedlot operation" means an open feedlot operation in which the open feedlot operation structures have been abandoned or the use of the open feedlot operation structures has been discontinued as evidenced by the removal of all animals, and the owner or operator has no immediate plans to repopulate the structures.

"Formed settled open feedlot effluent basin" means a settled open feedlot effluent basin which has walls and a floor constructed of concrete, concrete block, wood, steel, or similar materials. Similar materials may include, but are not limited to, plastic, rubber, fiberglass, or other synthetic materials. Materials used in a formed settled open feedlot effluent basin shall have the structural integrity to withstand expected internal and external load pressures.

"Karst terrain" means land having karst formations that exhibit surface and subterranean features of a type produced by the dissolution of limestone, dolomite, or other soluble rock and characterized by closed depressions, sinkholes, losing streams, or caves. If a 25–foot vertical separation distance can be maintained between the bottom of an open feedlot operation structure and limestone, dolomite, or other soluble rock, then the structure is not considered to be in karst terrain. Assistance in identifying karst terrain or potential karst terrain may be obtained by referring to: http://csbweb.igsb.uiowa.edu/imsgate/maps/afo_siting_atlas.asp.

"Large concentrated animal feeding operation" or *"large CAFO."* An AFO is defined as a large CAFO if it stables or confines as many as or more than the numbers of animals specified in any of the following categories:

1. 700 mature dairy cows, whether milked or dry;
2. 1,000 cattle, including but not limited to heifers, steers, bulls, veal calves and cow/calf pairs;
3. 2,500 swine each weighing 55 pounds or more;
4. 10,000 swine each weighing less than 55 pounds;
5. 500 horses;
6. 10,000 sheep or lambs;
7. 55,000 turkeys;
8. 30,000 laying hens or broilers, if the AFO uses a liquid manure handling system;
9. 125,000 chickens (other than laying hens), if the AFO uses other than a liquid manure handling system;
10. 82,000 laying hens, if the AFO uses other than a liquid manure handling system;
11. 1,000 animal units, where more than one category of animals is maintained using the same type of operation.

"Manure" means animal excreta or other commonly associated wastes of animals including, but not limited to, bedding, compost, litter, feed losses, raw materials or other materials commingled with manure or set aside for disposal.

"Medium concentrated animal feeding operation" or *"medium CAFO."* The term medium CAFO includes any AFO with the type and number of animals that fall within any of the ranges listed in paragraph *"a"* of this definition and which has been defined or designated as a CAFO. An AFO is defined as a medium CAFO if:

a. The type and number of animals that it stables or confines fall within any of the following ranges:

(1) 200 to 699 mature dairy cows, whether milked or dry;

(2) 300 to 999 cattle, including but not limited to heifers, steers, bulls, veal calves and cow/calf pairs;

(3) 750 to 2,499 swine each weighing 55 pounds or more;

(4) 3,000 to 9,999 swine each weighing less than 55 pounds;

(5) 150 to 499 horses;

(6) 3,000 to 9,999 sheep or lambs;

(7) 16,500 to 54,999 turkeys;

(8) 9,000 to 29,999 laying hens or broilers, if the AFO uses a liquid manure handling system;

(9) 37,500 to 124,999 chickens (other than laying hens), if the AFO uses other than a liquid manure handling system;

(10) 25,000 to 81,999 laying hens, if the AFO uses other than a liquid manure handling system;

(11) 300 to 999 animal units, where more than one category of animals is maintained using the same type of operation; and

b. Either one of the following conditions is met:

(1) Manure or process wastewater is discharged into waters of the United States through a man–made ditch, flushing system, or other similar man–made device; or

(2) Manure or process wastewater is discharged directly into waters of the United States which originate outside of and pass over, across or through the facility or otherwise come into direct contact with animals confined in the operation.

"NPDES permit" means a written permit of the department pursuant to the National Pollutant Discharge Elimination System (NPDES) program, to authorize and regulate the operation of a CAFO.

"Nutrient management plan" or *"NMP"* means a plan which provides for the management of manure, process wastewater, settled open feedlot effluent, settleable solids, open feedlot effluent, including the application of effluent, as provided in 65.112(459A).

"Open feedlot" means a lot, yard, corral, building, or other area used to house animals in conjunction with an open feedlot operation.

"Open feedlot effluent" means a combination of manure, precipitation–induced runoff, or other runoff from an open feedlot before its settleable solids have been removed.

"Open feedlot operation" means an unroofed or partially roofed animal feeding operation if crop, vegetation, or forage growth or residue is not maintained as part of the animal feeding operation during the period that animals are confined in the animal feeding operation.

2005 Iowa Code Supplement section 459A.103 provides that two or more open feedlot operations under common ownership or management are deemed to be a single open feedlot operation if they are adjacent or utilize a common area or system for open feedlot effluent disposal. To determine if two or more open feedlot operations are deemed to be one open feedlot operation, the first test is whether the open feedlot operations are under common ownership or management. If they are not under common ownership or management, they are not one open feedlot operation. The second test is whether the two open feedlot operations are adjacent or utilize a common area or system for open feedlot effluent disposal. If the two operations are not adjacent and do not use a common area or system for open feedlot effluent disposal, they are not one open feedlot operation.

"Open feedlot operation structure" means an open feedlot, settled open feedlot effluent basin, a solids settling facility, or an AT system. "Open feedlot operation structure" does not include a manure storage structure as defined in Iowa Code section 459.102.

"Owner" means the person who has title to the property where the animal feeding operation is located or the person who has title to the animal feeding operation structures. "Owner" does not include a person who has a lease to use the land where the animal feeding operation is located or to use the animal feeding operation structures.

"Permanent vegetation cover" means land which is maintained in perennial vegetation cover consisting of grasses, legumes, or both, and includes, but is not limited to, pastures, grasslands or forages.

"Process wastewater" means water directly or indirectly used in the operation of the AFO for any or all of the following: spillage or overflow from animal or poultry watering systems; washing, cleaning, or flushing pens, barns, manure pits, or other AFO facilities; direct contact swimming, washing, or spray cooling of animals; or dust control. Process wastewater also includes any water which comes into contact with any raw materials, products, or byproducts including manure, litter, feed, milk, eggs or bedding.

"Production area" means that part of an AFO that includes the area in which animals are confined, the manure storage area, the raw materials storage area, and the waste containment areas. The area in which animals are confined includes, but is not limited to, open lots, housed lots, feedlots, stall barns, free stall barns, milk rooms, milking centers, cow yards, barnyards, medication pens, walkers, animal walkways, and stables. The manure storage area includes, but is not limited to, lagoons, solids settling facilities, settled open feedlot effluent basins, storage sheds, stockpiles, under house or pit storages, liquid impoundments, static piles, and composting piles. The raw materials storage area includes, but is not limited to, feed silos, silage bunkers, and bedding materials. The waste containment area includes, but is not limited to, settling basins and areas within berms and diversions which separate uncontaminated storm water. Also included in the definition of production area is any area used in the storage, handling, treatment, or disposal of mortalities.

"Professional engineer" means a person engaged in the practice of engineering as defined in Iowa Code section 542B.2 who is issued a certificate of licensure as a professional engineer pursuant to Iowa Code section 542B.17.

"Release" means an actual, imminent or probable discharge of process wastewater, manure, open feedlot effluent, settled open feedlot effluent, or settleable solids from an open feedlot operation structure to surface water, groundwater, or an actual, imminent or probable discharge directly to a drainage tile line or intake resulting from storing, handling, transporting or land–applying process wastewater, manure, open feedlot effluent, settled open feedlot effluent or settleable solids.

"Settleable solids" means that portion of open feedlot effluent that meets all the following requirements:

1. The solids do not flow perceptibly under pressure.
2. The solids are not capable of being transported through a mechanical pumping device designed to move a liquid.
3. The constituent molecules of the solids do not flow freely among themselves but do show the tendency to separate under stress.

"Settled open feedlot effluent" means a combination of manure, precipitation–induced runoff, or other runoff originating from an open feedlot after its settleable solids have been removed.

"Settled open feedlot effluent basin" or *"runoff control basin"* means a covered or uncovered impoundment which is part of an open feedlot operation, if the primary function of the impoundment is to collect and store settled open feedlot effluent.

"Shallow well" means a well located and constructed in such a manner that there is not a continuous layer of low permeability soil or rock (or equivalent retarding mechanism acceptable to the department) at least 5 feet thick, the top of which is located at least 25 feet below the normal ground surface and above the aquifer from which water is to be drawn.

"Solids settling facility" means a basin, terrace, diversion, or other structure or solids removal method which is part of an open feedlot operation and which is designed and operated to remove settleable solids from open feedlot effluent. A "solids settling facility" does not include a basin, terrace, diversion, or other structure or solids removal method which retains the liquid portion of open feedlot effluent for more than seven consecutive days following a precipitation event.

"Stockpile" means any accumulation of manure, scraped solids, settleable solids or combination of manure and solids located outside of the open feedlot, where the scraped manure or solids are stored for less than six months.

"Unformed settled open feedlot effluent basin" means a settled open feedlot effluent basin, other than a formed settled open feedlot effluent basin.

"Vegetative infiltration basin" or *"VIB"* means an open feedlot operation structure in which settled open feedlot effluent is discharged into a relatively flat basin area which is bermed to prevent entry or discharge of surface water flows and is planted to permanent vegetation. An extensive tile system installed at a depth of three to five feet is used to collect infiltrated settled open feedlot effluent from the VIB and discharge it into a VTA for further treatment. As opposed to wetlands, which are designed to maintain a permanent water level, a VIB is designed to maximize water infiltration into the soil and thus normally will have standing water for only short periods of time. Removal of settleable solids is required prior to discharge of open feedlot effluent into the VIB. Soil suitability is essential to ensure adequate filtration and treatment of pollutants. Periodic harvesting of vegetation is required.

"Vegetative treatment area" or *"VTA"* means an open feedlot operation structure in which settled open feedlot effluent is discharged into areas which are level in one dimension and have a slight slope (less than 5 percent) in the other dimension and are planted to relatively dense permanent vegetation. Settled open feedlot effluent must be discharged evenly across the top width of the VTA and allowed to slowly flow downslope through the VTA. Level spreaders or other practices may be required to maintain even flow throughout the length of the VTA. Management to maintain a dense vegetation cover is required, as is periodic harvesting of vegetation.

"Water of the state" means any stream, lake, pond, marsh, watercourse, waterway, well, spring, reservoir, aquifer, irrigation system, drainage system, and any other body or accumulation of water, surface or underground, natural or artificial, public or private, which are contained within, flow through or border upon the state or any portion thereof.

"Waters of the United States" means the same as defined in 40 CFR 122.2 as that section existed on July 1, 2005.

567—65.101(459A) Minimum open feedlot effluent control requirements and reporting of releases. An open feedlot operation shall provide for the management of manure, process wastewater, settled open feedlot effluent, settleable solids and open feedlot effluent by using an open feedlot control method as provided in subrules 65.101(1) to 65.101(8). A release shall be reported to the department as provided in subrule 65.101(9).

65.101(1) All settleable solids from open feedlot effluent shall be removed prior to discharge into a water of the state.

a. The settleable solids shall be removed by use of a solids settling facility. The construction of a solids settling facility is not required where existing site conditions provide for removal of settleable solids prior to discharge into a water of the state.

b. The removal of settleable solids shall be deemed to have occurred when the velocity of flow of the open feedlot effluent has been reduced to less than 0.5 feet per second for a minimum of five minutes. A solids settling facility shall have sufficient capacity to store settleable solids between periods of land application and to provide required flow–velocity reduction for open feedlot effluent flow volumes resulting from a precipitation event of less intensity than a ten–year, one–hour frequency event. A solids settling facility which receives open feedlot effluent shall provide a minimum of one square foot of surface area for each eight cubic feet of open feedlot effluent per hour resulting from a ten–year, one–hour frequency precipitation event.

65.101(2) This subrule shall apply to an open feedlot operation which has obtained an NPDES permit pursuant to 65.102(455B,459A) or 65.103(455B,459A).

a. An open feedlot operation may discharge manure, process wastewater, settled open feedlot effluent, settleable solids, or open feedlot effluent into any waters of the United States due to a precipitation event, if any of the following apply:

(1) For an open feedlot operation that houses cattle, other than veal calves, the operation is designed, constructed, operated, and maintained to comply with the requirements of 567—subrule 62.4(12) and not to discharge manure, process wastewater, settled open feedlot effluent, settleable solids, or open feedlot effluent resulting from precipitation events less than or equal to the 25–year, 24–hour precipitation event into any waters of the United States.

(2) For an open feedlot operation that houses veal calves, swine, chickens, or turkeys, the operation is designed, constructed, operated, and maintained not to discharge manure, process wastewater, settled open feedlot effluent, settleable solids, or open feedlot effluent resulting from precipitation events less than or equal to the 100–year, 24–hour precipitation event into any waters of the United States.

b. If the open feedlot operation is designed, constructed, and operated in accordance with the requirements of 567—subrule 62.4(12) and in accordance with any of the manure control alternatives listed in Appendix A of these rules or the AT system requirements in rule 65.110(459A), the operation shall be considered to be in compliance with this rule, unless a discharge from the operation causes a violation of state water quality standards. If water quality standards violations occur, the department may impose additional open feedlot effluent control requirements upon the operation, as specified in subrule 65.101(3).

65.101(3) An open feedlot operation which has an animal unit capacity of 1,000 animal units or more, or an open feedlot operation which is a large CAFO, or a medium CAFO as defined in rule 65.100(455B,459,459A) or a designated CAFO pursuant to rule 65.103(455B,459A) shall not discharge manure, process wastewater, settled open feedlot effluent, settleable solids or open

feedlot effluent from an open feedlot operation structure or production area into any waters of the United States, unless the discharge is pursuant to an NPDES permit. The control of manure, process wastewater, settled open feedlot effluent, settleable solids or open feedlot effluent originating from the open feedlot operation may be accomplished by the use of a solids settling facility, settled open feedlot effluent basin, AT system, or any other open feedlot effluent control structure or practice approved by the department. The department may require the diversion of surface drainage prior to contact with an open feedlot operation structure. Settleable solids shall be settled from open feedlot effluent before the effluent enters a settled open feedlot effluent basin or AT system.

65.101(4) Alternative control practices. If, because of topography or other factors related to the site of an open feedlot operation, it is economically or physically impractical to comply with open feedlot effluent control requirements using an open feedlot control method in subrule 65.101(2), the department shall allow an open feedlot operation covered by the NPDES permit application requirements of 65.102(455B,459A) or 65.103(455B,459A) to use other open feedlot effluent control practices, provided the open feedlot operation satisfactorily demonstrates by appropriate methods that those practices will provide an equivalent level of open feedlot effluent control that would be achieved by using an open feedlot control method as provided in 65.101(2).

65.101(5) No direct discharge of open feedlot effluent shall be allowed from an open feedlot operation into a publicly owned lake, a known sinkhole, or an agricultural drainage well.

65.101(6) Land application.

a. General requirements. Open feedlot effluent shall be land–applied in a manner which will not cause pollution of surface water or groundwater. Application in accordance with the provisions of state law and the rules in this chapter shall be deemed as compliance with this requirement.

b. Designated areas. A person shall not apply manure on land within 200 feet from a designated area or, in the case of a high quality water resource, within 800 feet, unless one of the following applies:

(1) The manure is land–applied by injection or incorporation on the same date as the manure was land–applied.

(2) An area of permanent vegetation cover, including filter strips and riparian forest buffers, exists for 50 feet surrounding the designated area other than an unplugged agricultural drainage well or surface intake to an unplugged agricultural drainage well, and the area of permanent vegetation cover is not subject to manure application.

c. CAFOs. The discharge of manure, process wastewater, settled open feedlot effluent, settleable solids and open feedlot effluent to waters of the United States from a CAFO as a result of the application of that manure, process wastewater, settled open feedlot effluent, settleable solids and open feedlot effluent by the CAFO to land areas under its control is a discharge from that CAFO subject to NPDES permit requirements, except where the discharge is an agricultural storm water discharge as provided in 33 U.S.C. 1362(14). For the purpose of this paragraph, where the manure, process wastewater, settled open feedlot effluent, settleable solids or open feedlot effluent has been applied in accordance with site–specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the manure, process wastewater, settled open feedlot effluent, settleable solids and open feedlot effluent as specified in 65.112(8), a precipitation–related discharge of manure, process wastewater, settled open feedlot effluent, settleable solids and open feedlot effluent from land areas under the control of a CAFO is an agricultural storm water discharge.

65.101(7) The owner of an open feedlot operation who discontinues the use of the operation shall remove and land–apply in accordance with state law all manure, process wastewater and open feedlot effluent from the open feedlot operation structures as soon as practical but not later than six months following the date the open feedlot operation is discontinued. The owner of a CAFO shall maintain compliance with all requirements in the CAFO's NPDES permit until all

manure, process wastewater and open feedlot effluent has been removed and land–applied pursuant to the CAFO's NMP.

65.101(8) Stockpiling of scraped manure and settleable solids. A CAFO must manage stockpiles as required by 65.101(2) or 65.101(3). Stockpiles of manure scraped from open feedlot operations and stockpiles of settleable solids shall comply with the following requirements.

a. Stockpiles must be land–applied in accordance with 65.101(6) as soon as possible but not later than six months after they are established.

b. Stockpiles shall not be located within 200 feet from a designated area or, in the case of a high quality water resource, within 800 feet, and areas of concentrated flow located downslope of and within 200 feet of the stockpile shall be planted to permanent vegetation cover, including filter strips and riparian forest buffers.

c. Stockpiles shall not be located in areas where water ponds or has concentrated flow.

d. Stockpiles shall not be located within 200 feet of a drainage tile line intake or known sinkhole unless the stockpile is located so that any runoff from the stockpile will not reach the intake or sinkhole.

65.101(9) A release, as defined in rule 65.100(455B,459,459A), shall be reported to the department as provided in this subrule. This subrule does not apply to land application of manure, process wastewater, open feedlot effluent, settled open feedlot effluent or settleable solids in compliance with these rules, or to precipitation– or snowmelt–induced runoff from open feedlots in compliance with the minimum control requirements set forth in this rule.

a. Notification. A person storing, handling, transporting, or land–applying manure, process wastewater, open feedlot effluent, settled open feedlot effluent or settleable solids from an open feedlot operation who becomes aware of a release shall notify the department of the occurrence of release as soon as possible but not later than six hours after the onset or discovery of the release by contacting the department at (515)281–8694. The local police department or the office of the sheriff of the affected county shall also be contacted within the same time period if the release involves a public roadway and public safety could be threatened. Reports made pursuant to this rule shall be confirmed in writing as provided in 65.101(9)*"c."*

b. Verbal report. The verbal report of such a release should provide information on as many items listed in 65.101(9)*"c"* as available information will allow.

c. Written report. The written report of a release shall be submitted at the request of the department within 30 days after the verbal report of the release and contain at a minimum the following information:

(1) The approximate location of the alleged release (including at a minimum the quarter–quarter section, township and county in which the release occurred or was discovered).

(2) The time and date of onset of the alleged release, if known, and the time and date of the discovery of the alleged release.

(3) The time and date of the verbal report to the department of the release.

(4) The name, mailing address and telephone number of the person reporting the release.

(5) The name, mailing address and telephone number of any other person with knowledge of the event who can be contacted for further information.

(6) The source of the manure, process wastewater, open feedlot effluent, settled open feedlot effluent or settleable solids allegedly released (e.g., settled open feedlot effluent basin).

(7) The estimated or known volume of manure, process wastewater, open feedlot effluent, settled open feedlot effluent, or settleable solids allegedly released.

(8) The weather conditions at the time of the onset or discovery of the release.

(9) If known, the circumstances under which the alleged release occurred or exists (e.g., overflow, storage structure breach, equipment malfunction or breakdown, land runoff).

(10) The approximate location of the nearest stream or other water body which is or could be impacted by the alleged release, and the approximate location to the alleged release of any known tile intakes or tile lines which could be a direct conveyance to a surface water or groundwater.

(11) A description of any containment or remedial measures taken to minimize the impact of the release.

(12) Any information that may assist the department in evaluating the release.

d. Reporting of subsequent findings. All subsequent findings and laboratory results should be reported and submitted in writing to the department as soon as they become available.

e. Waiver of notification requirement. A waiver from the notification requirement of paragraph *"a"* of this subrule may be granted by the department for a release to a specific drainage tile line or intake if sufficient information is provided to demonstrate that the drainage tile line or intake will not result in a discharge to a water of the state.

567—65.102(455B,459A) NPDES permits required for CAFOs. Concentrated animal feeding operations (CAFOs) are point sources that require NPDES permits.

65.102(1) *Duty to apply.* Each CAFO owner or operator must apply for an NPDES permit, except as provided in subrule 65.102(2). The owner or operator of a CAFO that includes an open feedlot must apply for an individual NPDES permit. The application procedures are prescribed in rule 65.104(455B,459A).

65.102(2) *Exception.* An open feedlot operation shall not be required to obtain an NPDES permit if the operation does not discharge manure, process wastewater, settled open feedlot effluent, settleable solids, or open feedlot effluent into any waters of the United States.

567—65.103(455B,459A) Departmental evaluation; CAFO designation; remedial actions.

65.103(1) The department may evaluate any animal feeding operation that is not defined as a large or medium CAFO, and designate it as a CAFO if, after an on–site inspection, it is determined to be a significant contributor of manure or process wastewater to waters of the United States. In making this determination, the department shall consider the following factors:

a. The size of the operation and the amount of manure or process wastewater reaching waters of the United States;

b. The location of the operation relative to waters of the United States;

c. The means of conveyance of manure or process wastewater to waters of the United States;

d. The slope, vegetation, rainfall, and other factors affecting the likelihood or frequency of discharge of manure or process wastewater into waters of the United States; and

e. Other relevant factors.

65.103(2) No animal feeding operation with an animal capacity less than that specified for a medium CAFO shall be designated as a CAFO unless manure or process wastewater from the operation is discharged into a water of the United States:

a. Through a man–made ditch, flushing system, or other similar man–made device; or

b. Which originates outside of and passes over, across or through the facility or otherwise comes into direct contact with animals confined in the operation.

65.103(3) The owner or operator of a designated CAFO shall apply for an NPDES permit no later than 90 days after receiving written notice of the designation.

65.103(4) If departmental evaluation determines that any of the conditions listed in paragraph 65.103(4)*"a," "b,"* or *"c"* exist, the open feedlot operation shall institute necessary remedial actions within a time specified by the department to eliminate the conditions warranting the determination, if the operation receives a written notification from the department of the need to correct the conditions.

a. Settled open feedlot effluent, settleable solids from the open feedlot operation, or open feedlot effluent is being discharged into a water of the state and the operation is not providing the applicable minimum level of manure control as specified in rule 65.101(459A);

b. Settled open feedlot effluent, settleable solids from the open feedlot operation, or open feedlot effluent is causing or may reasonably be expected to cause pollution of a water of the state; or

c. Settled open feedlot effluent, settleable solids from the open feedlot operation, or open feedlot effluent is causing or may reasonably be expected to cause a violation of state water quality standards.

567—65.104(455B,459A) NPDES permits.

65.104(1) *Existing animal feeding operations holding an NPDES permit.* Animal feeding operations which hold a valid NPDES permit issued prior to September 14, 2005, are not required to reapply for an NPDES permit. However, the operations are required to apply for permit renewal in accordance with subrule 65.104(10).

65.104(2) *Existing animal feeding operations not holding an NPDES permit.* Animal feeding operations in existence prior to April 14, 2003, which were defined as CAFOs under rules that were in effect prior to April 14, 2003, but which have not obtained a permit, should have applied for an NPDES permit by April 14, 2003. Animal feeding operations in existence on April 14, 2003, which were not defined as CAFOs under rules that were in effect prior to April 14, 2003, shall apply for an NPDES permit no later than July 31, 2007.

65.104(3) *Expansion of existing animal feeding operations.* A person intending to expand an existing animal feeding operation which, upon completion of the expansion, will be defined as a CAFO shall apply for an NPDES permit at least 90 days prior to the scheduled expansion. Operation of the expanded portion of the facility shall not begin until an NPDES permit has been obtained.

65.104(4) *New animal feeding operations.* A person intending to begin a new animal feeding operation which, upon completion, will be defined as a CAFO shall apply for an NPDES permit at least 180 days prior to the date operation of the new animal feeding facility is scheduled. Operation of the new facility shall not begin until an NPDES permit has been obtained.

65.104(5) *Permits required as a result of departmental designation.* An animal feeding operation which is required to apply for an NPDES permit as a result of departmental designation (in accordance with the provisions of 65.103(455B,459A)) shall apply for an NPDES permit within 90 days of receiving written notification of the need to obtain a permit. Once application has been made, the animal feeding operation is authorized to continue to operate without a permit until the application has either been approved or disapproved by the department, provided that the owner or operator has submitted all requested information and promptly taken all steps necessary to obtain coverage.

65.104(6) *Voluntary permit applications.* Applications for NPDES permits received from animal feeding operations which are not defined as CAFOs will be acknowledged and returned to the applicant. NPDES permits will not be issued for facilities which are not defined or designated as CAFOs.

65.104(7) *Application forms.* An application for an NPDES permit shall be made on a form provided by the department. The application shall be complete and shall contain information required by the department. Applications submitted after September 30, 2006, shall include a nutrient management plan as required in rule 65.112(459A). The application shall be signed by the person who is legally responsible for the animal feeding operation and its associated manure or process wastewater control system.

65.104(8) *Compliance schedule.* When necessary to comply with a standard which must be met at a future date, an NPDES permit shall include a schedule for modification of the permitted facility to meet the standard. The schedule shall not relieve the permittee of the duty to obtain a construction permit pursuant to rule 65.105(459A).

65.104(9) *Permit conditions.* NPDES permits shall contain conditions required by 40 CFR Section 122.41 and conditions considered necessary by the department to ensure compliance with

all applicable rules of the department, to ensure that the production area and land application areas are operated and maintained as required by Iowa law, to protect the public health and beneficial uses of waters of the United States, and to prevent water pollution from manure storage or application operations. Any more stringent conditions of 2005 Iowa Code Supplement chapter 459A, 567—subrule 62.4(12), and this chapter that apply to animal feeding operations shall govern. For CAFOs that maintain cattle, swine, or poultry, the following conditions shall be included:

a. Nutrient management plan. Open feedlot CAFOs shall comply with the requirements of 65.112(459A) and any additional nutrient management plan requirements for CAFOs in these rules by December 31, 2006. CAFOs that seek to obtain coverage under an NPDES permit issued after December 31, 2006, shall have a nutrient management plan developed and implemented upon the date of permit coverage.

b. Inspections and record keeping.

(1) Visual inspections. Routine visual inspections of the CAFO production area must be conducted. At a minimum the following must be visually inspected:

1. Weekly inspections of all storm water diversion, runoff diversion structures, and devices channelling contaminated storm water to the open feedlot structure.

2. Daily inspection of water lines, including drinking water or cooling water lines.

(2) Corrective actions. Any deficiencies found as a result of the inspections required in 65.104(9)*"b"*(1) or as a result of the liquid level reporting required in 65.104(9)*"e"* must be corrected as soon as possible.

(3) The following records must be maintained on site for a period of five years from the date they are created and must be made available to the department upon request:

1. Records documenting the inspections required in 65.104(9)*"b"*(1).

2. Records of weekly liquid level observations as required in 65.104(9)*"e."*

3. Records documenting any actions taken to correct deficiencies as required in 65.104(9)*"b"*(2).

c. Large CAFOs—transfer of manure, process wastewater, settled open feedlot effluent, settleable solids, or open feedlot effluent. Prior to transferring manure, process wastewater, settled open feedlot effluent, settleable solids or open feedlot effluent to other persons, a large CAFO must provide the recipient of the manure, process wastewater, settled open feedlot effluent, settleable solids or open feedlot effluent with the most current nutrient analysis. A large CAFO must retain for five yearsrecords of the date, recipient name and address, nutrient analysis and approximate amount of manure, process wastewater, settled open feedlot effluent, settleable solids or open feedlot effluent transferred to another person.

d. Minimum monitoring requirements for AT systems. During the first two years of operation of an AT system, the following minimum monitoring will be required:

(1) Discharge monitoring. An effluent collection point must be established at the outlet of the AT system, and the flow volume recorded and an effluent sample collected on each day a discharge from the AT system occurs. Discharge samples must be submitted to a certified laboratory and analyzed for: total Kjeldahl N, NH4 N, total P, COD, total suspended solids, and chloride.

(2) Discharge monitoring—tile lines. If the AT system includes a tile system installed to enhance infiltration within the VTA in accordance with 65.110(6)*"h"* or 65.110(7)*"h,"* water samples shall be collected from a sampling point located downgradient of the VTA on each individual tile line or combination of tile lines on the following schedule:

1. Quarterly sampling. One sample shall be taken from each sampling point once each quarter (January – March, April – June, July – September, October – December), and the level of flow in the tile system recorded at the time of sampling. The sample shall be collected at least ten days after a rainfall event of one inch or greater; and samples must be taken at least two, but not more than four, months apart. If there is no discharge from the tile line at a time that meets these

requirements, documentation on appropriate department forms can be substituted for the sample and analysis. Collected samples shall be submitted to a certified laboratory and analyzed for: total Kjeldahl N, NH4 N, total P, COD, total suspended solids, and chloride.

2. Event sampling. Each year, two rainfall event related tile flow samples shall be collected from each sampling point. For each sampling event, one sample shall be taken from each sampling point three to five days following a rainfall event of one inch or greater, and the level of flow in the tile system recorded at the time of sampling. Collected samples shall be submitted to a certified laboratory and analyzed for: total Kjeldahl N, NH4 N, total P, COD, total suspended solids, and chloride.

(3) Groundwater monitoring. A minimum of two groundwater monitoring wells or piezometers (one upgradient and one downgradient) must be established at each AT system. Additional wells or piezometers may be required if the department determines they are necessary to adequately assess the impacts the AT system is having on groundwater. Samples must be collected from these wells quarterly and analyzed for: NH4 N, NO3 N, and chloride.

(4) Soil sampling.

1. Initial and permit renewal sampling. Soil sampling shall be conducted prior to initial discharge of open feedlot effluent into the AT system and repeated prior to renewal of the NPDES permit, as outlined below:

• VTA. A minimum of two sampling sites shall be established within each VTA cell, one located where runoff enters the VTA and one where runoff is discharged from the VTA. Soil samples shall be taken from these sites to a depth of 4 feet, with separate samples taken to represent the 0 to 6–inch depth, the 6– to 12–inch depth, and in one–foot increments thereafter. All samples shall be analyzed for NO3 N, NH4 N, P by either the Olsen or Mehlich–3 method, and pH.

If the length of effluent flow through the VTA exceeds 400 feet, an additional soil sample representing the 0 to 6–inch depth should be taken for each additional 200 feet of VTA length. Samples shall be analyzed for NO3 N, NH4 N, P by either the Olsen or Mehlich–3 method, and pH.

• VIB. One sampling site shall be established where open feedlot effluent enters the VIB. Soil samples at this site shall be taken to a depth of 4 feet, with separate samples taken to represent the 0 to 6–inch depth, the 6– to 12–inch depth, and in one–foot increments thereafter. These samples shall be analyzed for NO3 N, NH4 N, P by either the Olsen or Mehlich–3 method, and pH.

An additional sampling site shall be established where open feedlot effluent is discharged from the VIB through the tile system. Soil samples shall be taken at this site to represent the 0 to 6–inch depth, and analyzed for NO3 N, NH4 N, P by either the Olsen or Mehlich–3 method, and pH.

2. Annual sampling. One sampling site shall be established in each cell of a VTA and VIB in an area which is expected to receive the greatest amount of open feedlot effluent. Soil samples shall be taken from each site prior to initiating discharge of open feedlot effluent into the VTA or VIB and shall be repeated annually. Each sample shall represent a composite of 10 to 12 individual samples taken to a 6–inch depth, and analyzed for P using either the Olsen or Mehlich–3 method and for pH.

Monitoring requirements for an AT system following the initial two–year operation period will be determined at the time the NPDES permit for the operation is due for renewal.

e. Quarterly reporting requirements for CAFOs with outside liquid impoundments. A permittee with outside liquid impoundments must submit quarterly reports by April 10, July 10, October 10, and January 10, following the respective calendar quarters, documenting daily precipitation, weekly impoundment liquid levels, volume of liquid removed from the impoundments, and the date, time, duration, and estimated volume of any overflow. Liquid levels must be obtained by observing a depth marker which clearly indicates the minimum

capacity necessary to contain the runoff and direct precipitation of the 25–year, 24–hour precipitation event or the 100–year, 24–hour precipitation event as applicable pursuant to 65.101(2)*"a."*

f. Annual reporting requirements for all CAFOs with systems other than AT systems. All permittees must submit an annual report to the department by January 10 of the following year. The annual report must include:

(1) The number and type of animals in the open feedlot operation;

(2) Estimated amount of manure, process wastewater, settled open feedlot effluent, settleable solids, or open feedlot effluent generated by the CAFO in the previous 12 months (tons/gallons);

(3) Estimated amount of total manure transferred to other persons by the CAFO in the previous 12 months (tons/gallons);

(4) Total number of acres for land application covered by the nutrient management plan and the total number of acres under control of the CAFO that were used for land application of manure in the previous 12 months;

(5) Summary of all manure, process wastewater, settled open feedlot effluent, settleable solids, or open feedlot effluent discharges from the production area that have occurred in the previous 12 months, including date, time, and approximate volume; and

(6) A statement indicating whether the current version of the CAFO's nutrient management plan was developed or approved by a certified nutrient management planner.

g. Quarterly reporting requirements for CAFOs with AT systems. A permittee with an AT system must submit quarterly reports by April 10, July 10, October 10, and January 10, following the respective calendar quarters. The quarterly reports shall provide all of the following information:

(1) Daily precipitation.

(2) Dates on which manure, process wastewater, settled open feedlot effluent, open feedlot effluent, or settleable solids were removed from the production area and estimated amounts of manure,process wastewater, settled open feedlot effluent, settleable solids, or open feedlot effluent removed (tons/gallons).

(3) Dates on which discharges from the production area or the AT system occurred and the estimated duration and volume of discharge on each discharge date.

(4) Results of laboratory analyses of discharge samples for each date a discharge from the production area or the AT system occurred. If the results of laboratory analyses are not available by the due date of the quarterly report, the results shall be provided with the following quarter's report.

(5) Results of laboratory analyses of samples taken from the groundwater monitoring wells or piezometers. If the results of laboratory analyses are not available by the due date of the quarterly report, the results shall be provided with the following quarter's report.

h. Annual reporting requirements for CAFOs with AT systems. A permittee shall submit an annual report by January 10 of the following year. The annual report must include all of the following:

(1) The number and type of animals in the open feedlot operation.

(2) Estimated amount of total manure, process wastewater, settled open feedlot effluent, settleable solids, or open feedlot effluent generated by the CAFO in the previous 12 months (tons/gallons).

(3) Estimated amount of total manure, process wastewater, settled open feedlot effluent, settleable solids, or open feedlot effluent transferred to other persons by the CAFO in the previous 12 months (tons/gallons).

(4) Total number of acres for land application covered by the nutrient management plan and the total number of acres under control of the CAFO that were used for land application of manure, process wastewater, settled open feedlot effluent, settleable solids, or open feedlot effluent in the previous 12 months.

(5) Summary of all manure, process wastewater, settled open feedlot effluent, settleable solids, or open feedlot effluent discharges from the production area or AT system that have occurred in the previous 12 months, including date, time, and approximate volume.

(6) Harvest dates and estimated amounts of forage removed from the AT system during the previous 12 months.

(7) Results of soil and groundwater sampling within the AT system during the previous 12 months.

(8) A statement indicating whether the current version of the CAFO's nutrient management plan was developed or approved by a certified nutrient management planner.

65.104(10) *Permit renewal.*

a. General requirements. An NPDES permit may be issued for any period of time not to exceed five years. An application for renewal of an NPDES permit must be submitted to the department at least 180 days prior to the date the permit expires. Each permit to be renewed shall be subject to the rules of the department in effect at the time of renewal. A permitted animal feeding operation which ceases to be a CAFO will be exempted from the need to retain an NPDES permit if the permittee can demonstrate to the satisfaction of the department that there is no remaining potential for a discharge of manure that was generated while the operation was a CAFO, other than agricultural storm water from land application areas.

b. Permits involving use of AT systems.

(1) During the first two years of operation of an AT system, a permittee will be issued a two–year NPDES permit. Renewal of this permit is contingent upon proper operation and maintenance of the AT system, submittal of all required records and reports, and demonstration that the AT system is providing an equivalent level of performance to that achieved by a containment system that is designed and operated as required by statute, 567—subrule 62.4(12) and Division II of this chapter.

(2) If departmental review of an AT system indicates the system is not meeting the equivalent performance standard, the permittee may either be required to make needed system modifications to enable compliance with this standard or be required to install a conventional runoff containment system. Open feedlot operations found to be in compliance with the equivalent performance standard will be issued a five–year NPDES permit which allows continued use of the AT system.

65.104(11) *Permit modification, suspension or revocation.* The department may modify, suspend, refuse to renew or revoke in whole or part any NPDES permit for cause. Any more stringent requirement pursuant to 40 CFR Section 122.62, 122.63 or 122.64 shall control. Cause for modification, suspension or revocation of a permit may include the following:

a. Violation of any term or condition of the permit.

b. Obtaining a permit by misrepresentation of fact or failure to disclose fully all material facts.

c. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.

d. Failure to retain, make available, or submit the records and information that the department requires in order to ensure compliance with the operation and discharge conditions of the permit.

e. A determination by the department that the continued operation of a CAFO constitutes a clear, present and impending danger to public health or the environment.

567—65.105(459A) Construction permits.

65.105(1) *Open feedlot operations required to obtain a construction permit.* An open feedlot operation must obtain a construction permit prior to any of the following:

a. Constructing or expanding a settled open feedlot effluent basin or AT system or installing a settled open feedlot effluent transfer piping system if the open feedlot operation is required to be issued an NPDES permit.

b. Increasing the animal unit capacity of the open feedlot operation to more than the animal unit capacity approved by the department in a previous construction permit.

c. Increasing the volume of settled open feedlot effluent, settleable solids or open feedlot effluent stored at the open feedlot operation to more than the volume approved by the department in a previous construction permit.

d. Repopulating the open feedlot operation if it was discontinued for 24 months or more and the animal unit capacity will be 1,000 animal units or more.

65.105(2) *When a construction permit is not required.*

a. Research colleges. A construction permit is not required for construction of a settled open feedlot effluent basin or AT system if the basin or system is part of an open feedlot operation which is owned by a research college conducting research activities as provided in 2005 Iowa Code Supplement section 459A.105.

b. Solids settling facilities. A construction permit is not required for construction of a solids settling facility.

65.105(3) *Applications that cannot be approved.* The department shall not approve an application for a construction permit unless the applicant submits all of the following:

a. For an open feedlot operation submitting an application for a construction permit on or after September 30, 2006, a nutrient management plan as provided in rule 65.112(459A).

b. An engineering report, construction plans, and specifications prepared by a professional engineer or the Natural Resources Conservation Service of the United States Department of Agriculture certifying that the construction of the settled open feedlot effluent basin or AT system complies with the construction design standards required in Division II of chapter 65.

65.105(4) *Plan review criteria; time for approval or disapproval.*

a. Plan review criteria. Review of plans and specifications shall be conducted by the department to determine the potential of the settled open feedlot effluent basin or AT system to achieve the level of control being required of the open feedlot operation. Applicable criteria contained in federal law, state law, these rules, Natural Resources Conservation Service design standards and specifications, unless inconsistent with federal or state law or these rules, and United States Department of Commerce precipitation data will be used in the review. If the proposed facility plans are not adequately covered by these criteria, applicable criteria contained in current technical literature shall be used.

b. Time for approval or disapproval. The department shall approve or disapprove an application for a construction permit within 60 days after receiving the permit application. However, the applicant may deliver a notice requesting a continuance. Upon receipt of a notice, the time required for the department to act upon the application shall be suspended for the period provided in the notice, but for not more than 30 days after the department's receipt of the notice. The applicant may submit more than one notice. If review of the application is delayed because the application is incomplete, and the applicant fails to supply requested information within a reasonable time prior to the deadline for action on the application, the permit may be denied and a new application will be required if the applicant wishes to proceed. The department may also provide for a continuance when it considers the application. The department shall provide notice to the applicant of the continuance. The time required for the department to act upon the application shall be suspended for the period provided in the notice, but for not more than 30 days. However, the department shall not provide for more than one continuance.

65.105(5) *Expiration of construction permits.* The construction permit shall expire if construction, as defined in rule 65.106(459A), is not begun within one year and completed within three years of the date of issuance. A construction permit issued prior to September 14, 2005, shall expire if construction, as defined in rule 65.106(459A), is not begun within one year of the date of issuance and shall expire on September 15, 2012, if construction is not completed by September 14, 2012. The director may grant an extension of time to begin or complete

construction if it is necessary or justified, upon showing of such necessity or justification to the director.

65.105(6) *Revocation of construction permits.* The department may suspend or revoke a construction permit, modify the terms or conditions of a construction permit, or refuse to renew a permit expiring according to subrule 65.105(5) if it determines that the operation of the open feedlot operation constitutes a clear, present and impending danger to public health or the environment.

65.105(7) *Permit prior to construction.* An applicant for a construction permit shall notify the department prior to the start of construction for any open feedlot operation structure not required to be covered by a construction permit. The applicant shall not begin construction of a settled open feedlot effluent basin or AT system, or begin installation of a settled open feedlot effluent transfer piping system until the person has been granted a permit for the construction by the department.

567—65.106(459A) Construction. For purposes of these rules:

65.106(1) Construction of an animal feeding operation structure begins or an animal feeding operation structure is constructed when any of the following occurs:

a. Excavation commences for a proposed open feedlot operation structure or proposed expansion of an existing open feedlot operation structure.

b. Installation of forms for concrete for a proposed open feedlot operation structure or the proposed expansion of an existing open feedlot operation structure.

c. Installation of piping for movement of settled open feedlot effluent or open feedlot effluent within or between open feedlot operation structures as proposed or proposed to be expanded.

65.106(2) Construction does not begin upon occurrence of any of the following:

a. Removal of trees, brush, or other vegetative growth.

b. Construction of driveways or roads.

c. General earth moving for leveling or compacting at the site.

d. Installation of temporary utility services.

567—65.107(459A) Construction permit application. An open feedlot operation required to obtain a construction permit in accordance with the provisions of 65.105(1) shall apply for a construction permit at least 90 days before the date that construction, installation, or modification is scheduled to start.

65.107(1) Conceptual design. Prior to submitting an application for a construction permit, the applicant may submit a conceptual design and site investigation report to the department for review and comment.

65.107(2) Application for a construction permit for an open feedlot shall be made on a form provided by the department. The application shall include all of the information necessary to enable the department to determine the potential of the proposed settled open feedlot effluent basin or AT system to achieve the level of control required of the open feedlot. A construction permit application shall include the following:

a. The name of the owner of the open feedlot operation and the name of the open feedlot operation, including the owner's mailing address and telephone number.

b. The name of the contact person for the open feedlot operation, including the person's mailing address and telephone number.

c. The location of the open feedlot operation.

d. A statement providing that the application is for any of the following:

(1) The construction or expansion of a settled open feedlot effluent basin or AT system for an existing open feedlot operation which is not expanding;

(2) The construction or expansion of a settled open feedlot effluent basin or AT system for an existing open feedlot operation which is expanding;

(3) The construction of a settled open feedlot effluent basin or AT system for a proposed new open feedlot operation.

e. The animal unit capacity for each animal species in the open feedlot operation before and after the proposed construction.

f. An engineering report, construction plans and specifications prepared by a professional engineer or by Natural Resources Conservation Service personnel for the settled open feedlot effluent basin or AT system.

g. A report on the soil and hydrogeologic information for the site, as described in subrules 65.109(2) and 65.110(4).

h. Information including, but not limited to, maps, drawings and aerial photos that clearly show the location of all the following:

(1) The open feedlot operation and all existing and proposed settled open feedlot effluent basins or AT systems, clean water diversions, and other pertinent features or structures.

(2) Any other open feedlot operation under common ownership or common management and located within 1,250 feet of the open feedlot operation.

(3) Any public water supply system as defined in Iowa Code section 455B.171 or drinking water well which is located less than the distance from the open feedlot operation required by rule 65.108(455B,459A). Information shall also be provided as to whether the proposed settled open feedlot effluent basin or AT system will meet all applicable separation distances.

567—65.108(455B,459A) Well separation distances for open feedlot operations.

65.108(1) *Settled open feedlot effluent basins.* Settled open feedlot effluent basins shall be separated from wells as follows:

a. Public wells. 1,000 feet from shallow wells and 400 feet from deep wells;

b. Private wells. 400 feet from both shallow and deep wells.

65.108(2) *Open feedlots, solids settling facilities and AT systems.* Open feedlots, solids settling facilities and AT systems shall be separated from wells as follows: for both public and private wells, 200 feet from shallow wells and 100 feet from deep wells.

65.108(3) *Variances.* Variances to this rule may be granted by the director if the applicant provides an alternative that is substantially equivalent to the rule or provides improved effectiveness or protection as required by the rule. Variance requests shall be made in writing at the time the construction permit application is submitted. The denial of a variance may be appealed to the commission.

567—65.109(459A) Settled open feedlot effluent basins—investigation, design and construction requirements. A settled open feedlot effluent basin required to be constructed pursuant to a construction permit issued pursuant to 2005 Iowa Code Supplement section 459A.205 shall meet the design and construction requirements set forth in this rule.

65.109(1) *Drainage tile investigation and removal.* Prior to constructing a settled open feedlot effluent basin, the owner of the open feedlot operation shall investigate the site for the basin for a drainage tile line. The investigation shall be made by digging a core trench to a depth of at least six feet deep from ground level at the projected center of the berm of the basin. A written record of the investigation shall be submitted as part of the construction certification required in rule 65.111(459A). If a drainage tile line is discovered, one of the following solutions shall be implemented:

a. The drainage tile line shall be rerouted around the perimeter of the basin at a distance of least 25 feet horizontally separated from the outside toe of the berm of the basin. For an area of the basin where there is not a berm, the drainage tile line shall be rerouted at least 50 feet horizontally separated from the edge of the basin.

b. The drainage tile line shall be replaced with a nonperforated tile line under the basin floor. The nonperforated tile line shall be continuous and without connecting joints. There must be a minimum of three feet between the nonperforated tile line and the basin floor.

65.109(2) *Soils and hydrogeologic report.* A settled open feedlot effluent basin required to be constructed pursuant to a construction permit issued pursuant to rule 65.105(459A) shall meet design standards as required by a soils and hydrogeologic report. The report shall be submitted with the construction permit application as provided in rule 65.107(459A). The report shall include all of the following:

a. A description of the steps taken to determine the soils and hydrogeologic conditions at the proposed construction site, a description of the geologic units encountered, and a description of the effects of the soil and groundwater elevation and direction of flow on the construction and operation of the basin.

b. The subsurface soil classification of the site. A subsurface soil classification shall be based on ASTM international designation D 2487–92 or D 2488–90.

c. The results of a soils investigation conducted at a minimum of three locations within the area of the basin reflecting the continuous soil profile existing within the area of the basin. The soils investigation results shall be used in determining subsurface soil characteristics and groundwater elevation and direction of flow at the proposed site. The soils investigation shall be conducted and utilized as follows:

(1) By a qualified person ordinarily engaged in the practice of performing soils investigations.

(2) At locations that reflect the continuous soil profile conditions existing within the area of the proposed basin, including conditions found near the corners and the deepest point of the proposed basin. The soils investigation shall be conducted to a minimum depth of ten feet below the proposed bottom elevation of the basin.

(3) By methods which identify the continuous soil profile and do not result in mixing of soil layers. Soil corings using hollow stem augers and other suitable methods may be used.

(4) If located in karst terrain, at least one soil coring shall be taken to a minimum depth of 25 feet below the bottom elevation of the settled open feedlot effluent basin or into bedrock, whichever is shallower. The department may accept information from the department's Geosam database in lieu of the coring. If bedrock is encountered, adequate investigation of the bedrock formation shall be made to determine if it consists of limestone, dolomite, or other soluble rock.

(5) Soil corings may be used to determine current groundwater levels by completing the corings as temporary monitoring wells as provided in 65.109(3)*"a"*(1) and measuring the water levels in these wells no earlier than seven days after installation as provided in 65.109(3)*"a"*(2).

(6) Upon abandonment of soil core holes, all soil core holes including those developed as temporary water level monitoring wells shall be plugged with concrete, Portland cement concrete grout, bentonite, or similar materials.

(7) If excavation methods are used in conducting the soils investigation, upon closure these excavations must be filled with suitable materials and adequately compacted to ensure they will not compromise the integrity of the basin liner.

65.109(3) *Hydrology.*

a. Determination of groundwater table. For purposes of this rule, groundwater table is the seasonal high–water table determined by a professional engineer, a groundwater professional certified pursuant to 567—Chapter 134, or qualified staff from the department or Natural Resources Conservation Service (NRCS). If a construction permit is required, the department must approve the groundwater table determination.

(1) Current groundwater levels shall be measured as provided in this subparagraph for either a formed settled open feedlot effluent basin or an unformed settled open feedlot effluent basin. Three temporary monitoring wells shall be developed according to 567—subrule 110.11(8). The top of the well screen shall be within five feet of the ground surface. Each well shall be extended to at least two feet below the proposed top of the liner of an unformed settled open feedlot

effluent basin, or to at least two feet below the proposed bottom of the footings of a formed settled open feedlot effluent basin. In addition, the wells must be installed as follows:

1. Unformed basins. For an unformed settled open feedlot effluent basin, the monitoring wells may be installed in the soil core holes developed as part of conducting the soils investigation required in paragraph 65.109(2)*"c."*

2. Formed basins. For a formed settled open feedlot effluent basin, at least three temporary monitoring wells shall be installed as close as possible to three corners of the structure, with one of the wells close to the corner of deepest excavation. If the formed settled open feedlot effluent basin is circular, the three monitoring wells shall be equally spaced and one well shall be placed at the point of deepest excavation.

(2) The seasonal high–water table shall be determined by considering all relevant data, including the groundwater levels measured in the temporary monitoring wells not earlier than seven days following installation, NRCS soil survey information, soil characteristics such as color and mottling, other existing water table data, and other pertinent information. If a drainage system for artificially lowering the groundwater table will be installed in accordance with the requirements of paragraph 65.109(3)*"c,"*the level to which the groundwater table will be lowered will be considered to represent the seasonal high–water table.

b. The settled open feedlot effluent basin shall be constructed with a minimum separation of two feet between the top of the liner of the basin and the seasonal high–water table.

c. If a drainage tile line around the perimeter of the basin is installed a minimum of two feet below the top of the basin liner to artificially lower the seasonal high–water table, the top of the basin's liner may be a maximum of four feet below the seasonal high–water table which existed prior to installation of the perimeter tile system. The seasonal high–water table may be artificially lowered by gravity flow tile lines or other similar system. However, the following shall apply:

(1) Except as provided in subparagraph (2), an open feedlot operation shall not use a nongravity mechanical system that uses pumping equipment.

(2) If the open feedlot operation was constructed before July 1, 2005, the operation may continue to use its existing nongravity mechanical system that uses pumping equipment, or it may construct a new nongravity mechanical system that uses pumping equipment. However, an open feedlot operation that expands the area of its open feedlot on or after April 1, 2011, shall not use a nongravity mechanical system that uses pumping equipment.

(3) Drainage tile lines may be installed to artificially lower the seasonal high–water table at a settled open feedlot effluent basin, if all of the following conditions are satisfied:

1. A device to allow monitoring of the water in the drainage tile lines and a device to allow shutoff of the flow in the drainage tile lines are installed, if the drainage tile lines do not have a surface outlet accessible on the property where the settled open feedlot effluent basin is located.

2. Drainage tile lines are installed horizontally at least 25 feet away from the outside toe of the berm of the settled open feedlot effluent basin. Drainage tile lines shall be placed in a vertical trench and encased in granular material which extends upward to the level of the seasonal high–water table which existed prior to installation of the perimeter tile system.

65.109(4) *Karst terrain.*

a. Construction prohibited. Settled open feedlot effluent basins shall not be constructed in areas which drain to known sinkholes or in karst terrain. Structure sites located within one mile of karst terrain shall be considered to be located in karst terrain, unless site–specific geologic information is submitted documenting that 25 feet of suitable materials exist between the structure bottom and carbonated bedrock or limestone or dolomite.

b. The use of formed structures is required to store liquid or dry manure in karst terrain.

(1) Formed structures constructed of concrete in karst terrain shall comply with the provisions of 65.15(14).

(2) The use of formed structures constructed of materials other than concrete and located in areas which drain to known sinkholes or located in karst terrain may be approved by the department if the proposed structures are designed by a professional engineer, a minimum of five feet vertical separation is maintained between the structure bottom and carbonated bedrock, and the engineer certifies and provides data showing the permeability of the geologic material below the structure's base is sufficiently low to provide an adequate barrier to prevent percolation into carbonated bedrock or groundwater.

c. Construction of settled open feedlot effluent basins is allowed in areas identified as karst terrain if site–specific geologic information is submitted documenting that 25 feet of suitable materials exist between the structure bottom and carbonated bedrock or limestone or dolomite.

65.109(5) *Bedrock separation.* A settled open feedlot effluent basin shall be constructed with at least four feet of separation between the bottom of the basin and a bedrock formation.

65.109(6) *Floodplain requirements.*

a. Construction in floodplains. Open feedlot operation structures located on a floodplain or within a floodway of a river or stream may be required to obtain DNR permits and provide protection from inundation by flood waters, as specified in 567—Chapters 71 and 72.

b. Permits for dam construction. Open feedlot operation structures exceeding storage capacity or dam height thresholds may be required to obtain DNR permits, as specified in 567—71.3(455B) and 72.3(455B).

65.109(7) *Liner design and construction.* The liner of a settled open feedlot effluent basin shall comply with all of the following:

a. The liner shall comply with any of the following permeability standards:

(1) The liner shall be constructed to have a percolation rate that shall not exceed one–sixteenth inch per day at the design depth of the basin as determined by percolation tests conducted by the professional engineer. If a clay soil liner is used, the liner shall be constructed with a minimum thickness of 12 inches or the minimum thickness necessary to comply with the percolation rate in this paragraph, whichever is greater.

(2) The liner shall be constructed to have a percolation rate that shall not exceed one–sixteenth inch per day at the design depth of the basin. The design of the liner will specify a moisture content, compaction requirement, and liner thickness that will comply with the maximum allowable percolation requirement, and will be based on moisture content and percentage of maximum density as determined by a standard 5 point proctor test performed in accordance with ASTM D698 (Method A). The liner thickness will be based on laboratory tests of the compacted material, with a minimum liner thickness of 12 inches. Appropriate field or laboratory testing during construction shall be provided to verify the design requirements are met.

b. If a synthetic liner is used, the liner shall be installed to comply with the percolation rate required in 65.109(7)"*a*"(1).

65.109(8) *Berm erosion inspection and repair*. The owner of an open feedlot operation using a settled open feedlot effluent basin shall inspect the berms of the basin at least semiannually for evidence of erosion. If the inspection reveals erosion which may impact the basin's structural stability or the integrity of the basin's liner, the owner shall repair the berms.

567—65.110(459A) AT systems—design requirements.

65.110(1) *Containment volume.*

a. Adequate capacity must be provided within the AT system or within the solids settling facility for the open feedlot operation to contain expected open feedlot effluent from November 1 to March 30 or to hold the precipitation event as required by 65.101(2)"*a,*" whichever is greater. Controls on the solids settling facility or the AT system shall prevent release of collected open feedlot effluent to waters of the United States during the period from November 1 to March 30.

b. If the containment volume required in 65.110(1)"*a*" is provided in an open feedlot operation structure whose primary purpose is to remove settleable solids from open feedlot

effluent prior to discharge into an AT system, the basin shall not be required to comply with the liner design and construction requirements of 65.109(7), provided the basin does not retain collected open feedlot effluent for more than seven consecutive days following a precipitation event during the period from March 30 to November 1.

65.110(2) *Solids settling.* Settleable solids shall be removed from open feedlot effluent prior to discharge of the effluent into an AT system. Solids settling shall be conducted in conformance with the requirements of paragraph 65.101(1)*"b."*

65.110(3) *Drainage tile investigation and removal.* Prior to constructing an AT system, the owner of the open feedlot operation shall investigate the site for the AT system for drainage tile lines. The investigation shall be made by digging a core trench to a depth of at least six feet from ground level at the projected center of the berm of the AT system. A written record of the investigation shall be submitted as part of the construction certification required in rule 65.111(459A). If a drainage tile line is discovered, one of the following solutions shall be implemented:

a. The drainage tile line shall be rerouted around the perimeter of the AT system at a distance of least 25 feet horizontally separated from the toe of the outside berm of the AT system. For an area of the system where there is not a berm, the drainage tile line shall be rerouted at least 50 feet horizontally separated from the edge of the system.

b. The drainage tile line shall be replaced with a nonperforated tile line under the AT system. The nonperforated tile line shall be continuous and without connecting joints. There must be a minimum of three feet of separation between the nonperforated tile line and the soil surface of the AT system.

65.110(4) *Soils and hydrogeologic report.* An AT system constructed pursuant to a construction permit issued pursuant to rule 65.105(459A) shall meet design standards as required by a soils and hydrogeologic report. The report shall be submitted with the construction permit application as provided in rule 65.107(459A). The report shall include all of the following:

a. A description of the steps taken to determine the soils and hydrogeologic conditions at the proposed construction site, a description of the geologic units encountered, and a description of the effects of the soil and groundwater elevation and direction of flow on the construction and operation of the AT system.

b. Subsurface soil classification of the site. A subsurface soil classification shall be based on ASTM international designation D 2487–92 or D 2488–90.

c. The results of a soils investigation conducted at a minimum of three locations within the area of the proposed AT system for AT systems of five acres or less, with one additional soils investigation site utilized for each additional three acres of surface area or fraction thereof. The soils investigation results shall be used in determining subsurface soil characteristics and groundwater elevation and direction of flow at the proposed AT system site. The soils investigation shall be conducted and utilized as follows:

(1) By a qualified person ordinarily engaged in the practice of performing soils investigations.

(2) At locations that reflect the continuous soil profile conditions existing within the area of the proposed AT system. The soils investigation shall be conducted to a minimum depth of ten feet below the elevation of the soil surface of the proposed AT system.

(3) By methods which identify the continuous soil profile and do not result in mixing of soil layers. Investigation methods may include soil corings using hollow stem augers, soil test pits, or other suitable methods.

(4) If located in karst terrain, at least one soil coring shall be taken to a minimum depth of 25 feet below the elevation of the soil surface of the proposed AT system or into bedrock, whichever is shallower. The department may accept well log information from the department's Geosam database in lieu of the coring. If bedrock is encountered, adequate investigation of the bedrock formation shall be made to determine if it consists of limestone, dolomite, or other soluble rock.

(5) Soil core holes may be used to determine current groundwater levels by completing the core holes as temporary monitoring wells and measuring the water levels in these wells not earlier than seven days after installation.

(6) Upon abandonment of the soil core holes, all soil core holes, including those developed as temporary water level monitoring wells, shall be plugged with concrete, Portland cement concrete grout, bentonite, or similar materials.

(7) If soil test pits or other excavation methods are used in conducting the soils investigation, upon closure these excavations must be filled with suitable materials and adequately compacted to ensure they will not compromise the integrity of the AT system.

65.110(5) *Hydrology—groundwater table.* For purposes of this rule, groundwater table is the seasonal high–water table determined by a professional engineer, a groundwater professional certified pursuant to 567—Chapter 134, or qualified staff from the department or Natural Resources Conservation Service (NRCS). If a construction permit is required, the department must approve the groundwater table determination.

a. Groundwater level measurements. Groundwater levels shall be measured using at least one of the following methods:

(1) Temporary monitoring wells. Three temporary monitoring wells shall be developed to a minimum of ten feet below the surface of the proposed AT system and constructed in accordance with requirements of 567—subrule 110.11(8). The top of the well screen shall be within five feet of the ground surface. These monitoring wells may be installed in the soil core holes developed as part of conducting the soils investigation required in paragraph 65.110(4)*"c."*

(2) Test pits. Test pits may be used in lieu of temporary monitoring wells to determine the seasonal high–water table or prior to the construction of an AT system to ensure the required separation distance to the seasonal high–water table is being met**.** The bottom of each pit shall be a minimum of five feet below the proposed surface of the AT system. However, if the test pit is also being used to conduct the soils investigation required in 65.110(4)*"c,"* the bottom of the pit shall be a minimum of ten feet below the surface of the proposed AT system. Each pit shall be allowed to remain open and unaltered for a minimum of seven days for viewing by the department or NRCS qualified staff. Adequate protection (temporary berms and covers) shall be provided to prevent surface runoff from entering the test pits. Test pits shall be located as needed to provide an accurate assessment of soil materials and seasonal high groundwater levels throughout the area of the proposed AT system. A description of the materials present in the test pit shall be documented by all of the following:

- Digital photos;
- Description of soils including mottling;
- Weather conditions both prior to and during the period in which test pits are open.

b. Determination of seasonal high–water table. The seasonal high–water table shall be determined by considering all relevant data, including the groundwater levels measured in the temporary monitoring wells or test pits not earlier than seven days following installation, NRCS soil survey information, soil characteristics such as color and mottling found in soil cores and test pits, other existing water table data, and other pertinent information. If a drainage system for artificially lowering the groundwater table will be installed in accordance with the requirements of paragraph 65.110(6)*"g"* or 65.110(7)*"g,"* the level to which the groundwater table will be lowered will be considered to represent the seasonal high–water table.

65.110(6) *Vegetative infiltration basin followed by vegetative treatment area.*

a. Computer modeling. Results of predictive computer modeling for the proposed AT system shall be used to determine suitability of the proposed site for the AT system and to predict performance of the AT system as compared to the use of a 25–year, 24–hour runoff containment system, over a 25–year period. A summary of the computer modeling results shall be provided to the department.

b. Size. The computer model used to determine if the proposed AT system will meet the equivalent performance standard shall also be used to establish the minimum required size of the VIB and VTA. However, the size of the VIB shall not be less than 30 percent of the total drainage area (feedlot and other) served by the basin, and the size of the VTA shall not be less than 30 percent of the surface area of the VIB.

c. Slope. The following slope requirements apply to the constructed system components.

(1) VIB. The maximum slope of the constructed VIB shall not exceed 1 percent.

(2) VTA. The constructed VTA shall be level in one dimension and have a slight slope (maximum of 5 percent) in the other dimension.

d. Berming.

(1) VIB. The VIB must be bermed to prevent inflow of surface water from outside the VIB and prevent surface outflow of feedlot effluent from the VIB.

(2) VTA. The VTA must be bermed to prevent inflow of surface water from outside areas.

e. Spreaders. Settled open feedlot effluent must be discharged evenly across the top width of the VTA and allowed to slowly flow downslope through the VTA. Level spreaders or other practices may be required to maintain uniform flow of settled open feedlot effluent across the width of the VTA as flow moves downslope through the VTA.

f. Soil permeability. Soil permeability within the VIB and VTA must be from 0.6 to 2.0 inches per hour throughout the soil profile to a depth of five feet. Soil permeability must be verified by conducting on–site or laboratory soil permeability testing.

g. Groundwater lowering system. The seasonal high–water table within the VIB and the VTA must be capable of being lowered to a depth of four to five feet with a perimeter tile system installed outside of the VIB or VTA. Design information must be provided which demonstrates the adequacy of the proposed groundwater lowering system. The tile system must satisfy the following requirements:

(1) If the tile system does not have a surface outlet accessible on the property where the AT system is located, a device to allow monitoring of the water in the tile system and a device to allow shutoff of the flow in the tile system must be installed.

(2) Tile lines in the system must be installed horizontally at least 25 feet away from the outside toe of the berm of the VIB or VTA.

h. Tile system to enhance infiltration within the VTA. A tile system may be installed at the perimeter of the VTA cells to enhance infiltration within the VTA. The tile system must satisfy the following requirements:

(1) Tile lines shall be installed at the centerline of the berms of the VTA cells.

(2) The tile lines shall be constructed such that no settled open feedlot effluent can enter the lines except through infiltration through the soil profile.

(3) A shutoff valve and sampling point located downslope of the VTA cell shall be provided for each individual tile line. However, if multiple tile lines are brought together into a common tile line, a single shutoff valve and sampling point may be utilized.

(4) Monitoring of the tile lines must be conducted in accordance with the requirements of 65.104(9)*"d"*(2).

i. Depth to sands, gravels, or glacial outwash.

(1) VIB. A VIB is not allowed if the depth to sands, gravels, or glacial outwash is less than ten feet.

(2) VTA. A VTA is not allowed if the depth to sands, gravels, or glacial outwash is less than six feet.

(3) A soils investigation that documents sands found are in isolated sand lenses that will not have a significant impact on subsurface water flow or goundwater quality shall not prohibit use of the site.

j. Depth to bedrock. A minimum of ten feet of overburden or loose material must exist between the surface of the constructed VIB or VTA and underground bedrock.

k. Flooding. Both the VIB and the VTA must be constructed in areas which are not subject to flooding more frequently than once in 25 years.

l. Distance to water bodies. The following distances, measured along the path of water flow, shall be provided between the point of discharge from the VTA and the receiving water body.

(1) Designated use streams referenced in 567—subrule 61.3(5). A minimum distance of 500 feet or one–half foot distance per animal unit capacity of the open feedlot area which drains to the VTA, whichever is greater, shall be provided.

(2) All other uncrossable intermittent streams. A minimum distance of 200 feet shall be provided.

65.110(7) *Stand–alone VTA.*

a. Computer modeling. Results of predictive computer modeling for the proposed alternative technology system shall be used to determine suitability of the proposed site for the system and to predict performance of the alternative technology system as compared to the use of a 25–year, 24–hour runoff containment system, over a 25–year period. A summary of the computer modeling results shall be provided to the department.

b. Size. The computer model used to determine if the proposed AT system will meet the equivalent performance standard shall also be used to establish the minimum required size of the VTA. However, in no case shall the size of the VTA be less than the following:

(1) 50 percent of the total drainage area (feedlot and other) served if the soil permeability is from 0.6 to 2.0 inches per hour.

(2) 100 percent of the total drainage area (feedlot and other) served if the soil permeability is from 0.2 to 0.6 inches per hour.

c. Slope. The constructed VTA shall be level in one dimension and have a slight slope (maximum of 5 percent) in the other dimension.

d. Berming. The VTA must be bermed to prevent inflow of surface water from outside areas.

e. Spreaders. Settled open feedlot effluent must be discharged evenly across the top width of the VTA and allowed to slowly flow downslope through the VTA. Level spreaders or other practices may be required to maintain uniform flow of settled open feedlot effluent across the width of the VTA as flow moves downslope through the VTA.

f. Soil permeability. Soil permeability within the VTA must be from 0.2 to 2.0 inches per hour throughout the soil profile to a depth of five feet. Soil permeability must be verified by conducting on–site or laboratory soil permeability testing.

g. Groundwater lowering system. The seasonal high–water table within the VTA must be capable of being lowered to a depth of four to five feet with a perimeter tile system installed outside of the VTA. Design information must be provided which demonstrates the adequacy of the proposed groundwater lowering system. The tile system must satisfy the following requirements:

(1) If the tile system does not have a surface outlet accessible on the property where the AT system is located, a device to allow monitoring of the water in the tile system and a device to allow shutoff of the flow in the tile system must be installed.

(2) Tile lines in the system must be installed horizontally at least 25 feet away from the outside toe of the berm of the VTA.

h. Tile system to enhance infiltration within the VTA. A tile system may be installed at the perimeter of the VTA cells to enhance infiltration within the VTA. The tile system must satisfy the following requirements:

(1) Tile lines shall be installed at the centerline of the berms of the VTA cells.

(2) The tile lines shall be constructed such that no settled open feedlot effluent can enter the lines except through infiltration through the soil profile.

(3) A shutoff valve and sampling point located downslope of the VTA cell shall be provided for each individual tile line. However, if multiple tile lines are brought together into a common tile line, a single shutoff valve and sampling point may be utilized.

(4) Monitoring of the tile lines must be conducted in accordance with the requirements of 65.104(9)*"d"*(2).

i. Depth to sands, gravels, or glacial outwash. A VTA is not allowed if the depth to sands, gravels, or glacial outwash is less than six feet. A soils investigation that documents sands found are in isolated sand lenses that will not have a significant impact on subsurface water flow or goundwater quality shall not prohibit use of the site.

j. Depth to bedrock. A minimum of ten feet of overburden or loose material must exist between the surface of the constructed VTA and underground bedrock.

k. Flooding. The VTA must be constructed in areas which are not subject to flooding more frequently than once in 25 years.

l. Distance to water bodies. The following distances, measured along the path of water flow, shall be provided between the point of discharge from the VTA and the receiving water body.

(1) Designated use streams referenced in 567—subrule 61.3(5). A minimum distance of 500 feet or one–half foot distance per animal unit capacity of the feedlot area which drains to the VTA, whichever is greater, shall be provided.

(2) All other uncrossable intermittent streams. A minimum distance of 200 feet shall be provided.

567—65.111(459A) Construction certification.

65.111(1) The owner of an open feedlot operation who is issued a construction permit for a settled open feedlot effluent basin or AT system as provided in rule 65.105(459A) on or after July 1, 2005, shall submit to the department a construction certification from a professional engineer certifying all of the following:

a. The basin or AT system was constructed in accordance with the design plans submitted to the department as part of an application for a construction permit pursuant to rule 65.107(459A). If the actual construction deviates from the approved design plans, the construction certification shall identify all changes and certify that the changes were consistent with all applicable standards of these rules.

b. The basin or AT system was inspected by the professional engineer after completion of construction and before commencement of operation.

65.111(2) A written record of an investigation for drainage tile lines, including the findings of the investigation and actions taken to comply with 65.109(1) or 65.110(3), shall be submitted as part of the construction certification.

567—65.112(459A) Nutrient management plan requirements.

65.112(1) The owner of an open feedlot operation which has an animal unit capacity of 1,000 animal units or more or which is required to be issued an NPDES permit shall develop and implement a nutrient management plan meeting the requirements of this rule by December 31, 2006. For the purpose of this rule, requirements pertaining to open feedlot effluent also apply to settled open feedlot effluent and settleable solids.

65.112(2) Not more than one open feedlot operation shall be covered by a single nutrient management plan.

65.112(3) A person shall not remove manure, process wastewater or open feedlot effluent from an open feedlot operation structure which is part of an open feedlot operation for which a nutrient management plan is required under this rule, unless the department approves a nutrient management plan as required in this rule.

65.112(4) The department shall not approve an application for a permit to construct a settled open feedlot effluent basin or AT system unless the owner of the open feedlot operation applying for approval submits a nutrient management plan together with the application for the construction permit as provided in rule 65.105(459A). The owner shall also submit proof that the owner has published a notice for public comment as provided in 65.112(7).

65.112(5) If a construction permit is required as provided in rule 65.105(459A), the department shall approve or disapprove the nutrient management plan as part of the construction permit application. If a construction permit is not required, the department shall approve or disapprove the nutrient management plan within 60 days from the date that the department receives the nutrient management plan.

65.112(6) Prior to approving or disapproving a nutrient management plan as required in this rule, the department may receive comments exclusively to determine whether the nutrient management plan is submitted according to procedures required by the department and that the nutrient management plan complies with the provisions of this rule.

65.112(7) Public notice.

a. The owner of the open feedlot operation shall publish a notice for public comment in a newspaper having a general circulation in the county where the open feedlot operation is or is proposed to be located and in the county where manure, process wastewater, or open feedlot effluent which originates from the open feedlot operation may be applied under the terms and conditions of the nutrient management plan.

b. The notice for public comment shall include all of the following:

(1) The name of the owner of the open feedlot operation submitting the nutrient management plan.

(2) The name of the township where the open feedlot operation is or is proposed to be located and the name of the township where manure, process wastewater, or open feedlot effluent originating from the open feedlot operation may be applied.

(3) The animal unit capacity of the open feedlot operation.

(4) The time when and the place where the nutrient management plan may be examined as provided in Iowa Code section 22.2.

(5) Procedures for providing public comment to the department. The notice shall also include procedures for requesting a public hearing conducted by the department. The department is not required to conduct a public hearing if it does not receive a request for the public hearing within ten days after the first publication of the notice for public comment as provided in this subrule. If such a request is received, the public hearing must be conducted within 30 days after the first date that the notice for public comment was published.

(6) A statement that a person may acquire information relevant to making comments under this subrule by accessing the department's Internet Web site. The notice for public comment shall include the address of the department's Internet Web site as required by the department.

65.112(8) A nutrient management plan shall include all of the following:

a. Restrictions on the application of open feedlot effluent based on all of the following:

(1) A phosphorus index of each field in the nutrient management plan, as defined in 65.17(17)*"a,"* including the factors used in the calculation. A copy of the NRCS phosphorus index detailed report shall satisfy the requirement to include the factors used in the calculation. In addition, total phosphorus (as P_2O_5) available to be applied from the open feedlot operation shall be included.

(2) Calculations necessary to determine the land area required for the application of manure, proc–ess wastewater and open feedlot effluent from an open feedlot operation based on nitrogen or phosphorus use levels (as determined by phosphorus index) in order to obtain optimum crop yields according to a crop schedule specified in the nutrient management plan, and according to requirements specified in 65.17(4).

b. Information relating to the application of the manure, process wastewater and open feedlot effluent, including all of the following:

(1) Nutrient levels of the manure, process wastewater and open feedlot effluent.

(2) Application methods, the timing of the application, and the location of the land where the application occurs.

c. If the application is on land other than land owned or rented for crop production by the owner of the open feedlot operation, the plan shall include a copy of each written agreement executed by the owner of the open feedlot operation and the landowner or the person renting the land for crop production where the manure, process wastewater or open feedlot effluent may be applied.

d. An estimate of the manure, process wastewater and open feedlot effluent volume or weight produced by the open feedlot operation.

e. Information which shows all of the following:

(1) There is adequate storage for manure, process wastewater, stockpiled manure and open feedlot effluent, including procedures to ensure proper operation and maintenance of the storage structures.

(2) The proper management of animal mortalities to prevent discharge of pollutants to surface water and to ensure that animals are not disposed of in an open feedlot operation structure or a treatment system that is not specifically designed to treat animal mortalities.

(3) Surface drainage prior to contact with an open feedlot structure is diverted, as appropriate, from the open feedlot operation.

(4) Animals kept in the open feedlot operation do not have direct contact with any waters of the United States.

(5) Chemicals or other contaminants handled on site are not disposed of in manure, process wastewater, an open feedlot operation structure or a treatment system that is not specifically designed to treat such chemicals or contaminants.

(6) Equipment used for the land application of manure, process wastewater or open feedlot effluent must be periodically inspected for leaks.

(7) Identification of specific records that will be maintained to document the implementation and management of the requirements in this subrule.

65.112(9) If an open feedlot operation uses an alternative technology system as provided in rule 65.110(459A), the nutrient management plan is not required to provide for settled open feedlot effluent that enters the AT system.

65.112(10) Current nutrient management plan, record keeping and inspections.

a. Current nutrient management plan. The owner of an open feedlot operation who is required to submit a nutrient management plan shall maintain a current nutrient management plan at the site of the open feedlot operation and shall make the current nutrient management plan available to the department upon request. If nutrient management practices change, a person required to submit a nutrient management plan shall make appropriate changes consistent with this rule. If values other than the standard table values are used for nutrient management plan calculations, the source of the values used shall be identified.

b. Record keeping. Records shall be maintained by the owner of a open feedlot operation who is required to submit a nutrient management plan. This recorded information shall be maintained for five years following the year of application or for the length of the crop rotation, whichever is greater. Rec–ords shall be maintained at the site of the open feedlot operation and shall be made available to the department upon request. Records to demonstrate compliance with the nutrient management plan shall include the following:

(1) Factors used to calculate the manure, process wastewater and open feedlot effluent application rate:

1. Optimum yield for the planned crop.
2. Types of nitrogen credits and amounts.
3. Remaining crop nitrogen needed.
4. Nitrogen content and first–year nitrogen availability of the manure, process wastewater and open feedlot effluent.
5. Phosphorus content of the manure, process wastewater and open feedlot effluent as required in 65.17(3)*"i"*(1) and (2). If an actual sample is used, documentation shall be provided.

(2) If phosphorus–based application rates are used, the following shall be included:

1. Crop rotation.
2. Phosphorus removed by crop harvest of that crop rotation.

(3) Maximum allowable manure, process wastewater and open feedlot effluent application rate.

(4) Actual manure, process wastewater and open feedlot effluent application information:

1. Method(s) of application when manure, process wastewater or open feedlot effluent from the open feedlot operation was applied.
2. Date(s) when the manure, process wastewater or open feedlot effluent from the open feedlot operation was applied.
3. Weather conditions at time of application and for 24 hours prior to and following the application.
4. Location of the field where the manure, process wastewater or open feedlot effluent from the open feedlot operation was applied, including the number of acres.
5. The manure, process wastewater or open feedlot effluent application rate.
6. Dates when application equipment was inspected.

(5) Date(s) and application rate(s) of commercial nitrogen and phosphorus on fields that received manure, process wastewater or open feedlot effluent. However, if the date and application rate information is for fields which are not owned for crop production or which are not rented or leased for crop production by the person required to keep records pursuant to this subrule, an enforcement action for noncompliance with a nutrient management plan or the requirements of this subrule shall not be pursued against the person required to keep records pursuant to this subrule or against any other person who relied on the date and application rate in records required to be kept pursuant to this subrule, unless that person knew or should have known that nitrogen or phosphorus would be applied in excess of maximum levels set forth in paragraph 65.17(1)*"a."* If nutrients are applied to fields not owned, rented or leased for crop production by the person required to keep records pursuant to this subrule, that person shall obtain from the person who owns, rents or leases those fields a statement specifying the planned commercial nitrogen and phosphorus fertilizer rates to be applied to each field receiving the nutrients.

(6) A copy of the current soil test laboratory results for each field in the nutrient management plan.

(7) All applicable records identified in 65.112(8)*"e"*(7).

c. Record inspection. The department may inspect an open feedlot operation at any time during normal working hours and may inspect the nutrient management plan and any records required to be maintained.

567—65.113(459A) Complaint investigations. Complaints of violations of Iowa Code chapter 455B or 459, or 2005 Iowa Code Supplement chapter 459A, or these rules, which are received by the department or are forwarded to the department by a county, following a county board of supervisors' determination that a complainant's allegation constitutes a violation, shall be investigated by the department if it is determined that the complaint is legally sufficient and an investigation is justified.

65.113(1) If after evaluating a complaint to determine whether the allegation may constitute a violation, without investigating whether the facts supporting the allegation are true or untrue, the county board of supervisors shall forward its finding to the department director.

65.113(2) A complaint is legally sufficient if it contains adequate information to investigate the complaint and if the allegation constitutes a violation, without an investigation of whether the facts supporting the allegation are true or untrue, of department rules, Iowa Code chapter 455B or 459, or 2005 Iowa Code Supplement chapter 459A, or environmental standards in regulations subject to federal law and enforced by the department.

65.113(3) The department in its discretion shall determine the urgency of the investigation, and the time and resources required to complete the investigation, based upon the circumstances of the case, including the severity of the threat to the quality of surface water or groundwater.

65.113(4) The department shall notify the complainant and the alleged violator if an investigation is not conducted specifying the reason for the decision not to conduct an investigation.

65.113(5) The department will notify the county board of supervisors where the violation is alleged to have occurred before doing a site investigation unless the department determines that a clear, present and impending danger to the public health or environment requires immediate action.

65.113(6) The county board of supervisors may designate a county employee to accompany the department on the investigation of any site as a result of a complaint.

65.113(7) A county employee accompanying the department on a site investigation has the same right of access to the site as the department official conducting the investigation during the period that the county designee accompanies the department official.

65.113(8) Upon completion of an investigation, the department shall notify the complainant of the results of the investigation, including any anticipated, pending or complete enforcement action arising from the investigation. The department shall deliver a copy of the notice to the open feedlot operation that is the subject of the complaint, any alleged violators if different from the open feedlot operation and the county board of supervisors of the county where the violation is alleged to have occurred.

65.113(9) When a person who is a department official, an agent of the department, or a person accompanying the department official or agent enters the premises of an open feedlot operation, both of the following shall apply:

a. The person may enter at any reasonable time in and upon any private or public property to investigate any actual or possible violation of Iowa Code chapter 455B or 459, or 2005 Iowa Code Supplement chapter 459A, or these rules. However, the owner or person in charge shall be notified.

(1) If the owner or occupant of any property refuses admittance to the operation, or if prior to such refusal the director demonstrates the necessity for a warrant, the director may make application under oath or affirmation to the district court of the county in which the property is located for the issuance of a search warrant.

(2) In the application the director shall state that an inspection of the premises is mandated by the laws of this state or that a search of certain premises, areas, or things designated in the application may result in evidence tending to reveal the existence of violations of public health, safety, or welfare requirements imposed by statutes, rules or ordinances established by the state or a political subdivision thereof. The application shall describe the area, premises, or thing to be searched, give the date of the last inspection if known, give the date and time of the proposed inspection, declare the need for such inspection, recite that notice of desire to make an inspection has been given to affected persons and that admission was refused if that be the fact, and state that the inspection has no purpose other than to carry out the purpose of the statute, ordinance, or regulation pursuant to which inspection is to be made. If an item of property is sought by the director, it shall be identified in the application.

(3) If the court is satisfied from the examination of the applicant, and of other witnesses, if any, and of the allegations of the application of the existence of the grounds of the application, or that there is probable cause to believe their existence, the court may issue such search warrant.

(4) In making inspections and searches pursuant to the authority of this rule, the director must execute the warrant:

1. Within ten days after its date.

2. In a reasonable manner, and any property seized shall be treated in accordance with the provisions of Iowa Code chapters 808, 809, and 809A.

3. Subject to any restrictions imposed by the statute, ordinance or regulation pursuant to which inspection is made.

b. The person shall comply with standard biosecurity requirements customarily required by the open feedlot operation which are necessary in order to control the spread of disease among an animal population.

567—65.114(455B,459A) Transfer of legal responsibilities or title. If title or legal responsibility for a permitted open feedlot operation and its open feedlot operation structure is transferred, the person to whom title or legal responsibility is transferred shall be subject to all terms and conditions of the permit and these rules. The person to whom the permit was issued and the person to whom title or legal responsibility is transferred shall notify the department of the transfer of legal responsibility or title of the operation within 30 days of the transfer. Within 30 days of receiving a written request from the department, the person to whom legal responsibility is transferred shall submit to the department all information needed to modify the permit to reflect the transfer of legal responsibility.

These rules are intended to implement Iowa Code sections 455B.171 to 455B.191, 459.314, and 459.601 and 2005 Iowa Code Supplement chapter 459A